CLAIMS

1.   A process of identifying and managing support service applications associated with consumer electronic devices, the process for execution by a gateway device communicatively coupled with each of the electronic devices via a home network, the gateway device being operative to access the Internet and being communicatively coupled with a display unit, comprising the steps of:

    determining device ID information associated with a selected one of the electronic devices for which a support service application is required;

    providing said device ID information to a selected server computing system via the Internet;

    downloading a support service application associated with said selected device from the selected server computing system; and

    executing said downloaded support service application at the gateway device to provide a remote interactive support service process for said selected device.

2.   A process of identifying and managing support service applications as recited in claim 1 wherein said support service process comprises a remote interactive manual providing educational instructions to a home network system user regarding operation of said selected device.

3.   A process of identifying and managing support service applications as recited in claim 1 wherein said support service process comprises a remote interactive maintenance process for instructing a home network system user in solving maintenance problems associated with said selected device.

4.   A process of identifying and managing support service applications as recited in claim 1 wherein said support service process comprises a remote interactive diagnostic process comprising the steps of:

    communicating with said selected device via said home network in order to determine a current functional state of said selected device; and

    displaying information indicative of said current functional state of said selected device on the display unit.

1   5.   A process of identifying and managing support service applications as recited in claim

2   4 wherein said diagnostic process further comprises the steps of:

3   determining diagnostic information based on said current functional state of said

4   selected device, said diagnostic information indicating a problem associated with said

5   selected device; and

6   displaying said diagnostic information on the display unit.

1   6.   A process of identifying and managing support service applications as recited in claim

2   5 wherein said diagnostic process further comprises the step of:

3   transmitting said diagnostic information to the server computing system for the

4   purpose of creating a database record based on said diagnostic information and said

5   associated device ID information.

1   7.   A process of identifying and managing support service applications as recited in claim

2   4 wherein said diagnostic process further comprises the steps of:

3   determining user instructional information based on said current functional state of

4   said selected device, said instructional information for providing instructions to the user for

5   operating said selected device;

6   displaying said user instructional information on the display unit.

1   8.   A process of identifying and managing support service applications as recited in claim

2   5 wherein said diagnostic process further comprises the steps of:

3   determining user instructional information based on said diagnostic information, said

4   instructional information for providing instructions to the user for solving said problem

5   associated with said selected device; and

6   displaying said user instructional information on the display unit.

1   9.   A process of identifying and managing support service applications as recited in claim

2   1 wherein said step of providing said device ID information to a selected server computing

3   system comprises the steps of:

4   forming a uniform resource locator (URL) based on said device ID information; and

5   accessing said selected server via the Internet using said URL.

1   10.   A process of identifying and managing support service applications as recited in claim

2   9 wherein said device ID information includes associated vendor information indicative of a

3   vendor of the selected device, and model information indicative of the model of the selected

4   device.

1   11.   A process of identifying and managing support service applications as recited in

2   claim 10 wherein said step of forming a URL comprises the steps of:

3   determining a host name based on said vendor information;

4   determining a file path based on said model information; and

5   forming the URL based on said HOST name and said file path.

12.   A process of identifying and managing support service applications as recited in claim

10 wherein said step of forming a URL comprises the steps of:

         determining a host name based on said vendor information; and

         forming the URL based at least in part on said HOST name.

13.   A process of identifying and managing support service applications as recited in claim

1 wherein said support service process further comprises the steps of:

         generating and displaying a help menu enabling a user of the gateway device to select

4   from a list of help topics associated with operation of the selected device;

5   receiving user input indicative of a selected help topic;

6   providing information indicative of said selected help topic to the server computing

7   system; and

8   downloading a document from the server computing system, said document providing

9   information associated with said selected device under said selected help topic.

1   14.   A process of identifying and managing support service applications as recited in claim

2   4 wherein said support service process further comprises the steps of:

3   providing information indicative of said current functional state to the server

4   computing system for the purpose of accessing a selected document based on said current

5   functional state; and

6   downloading a document from the server computing system, said document providing

7   instructional information about the selected device taking into account said current functional

8   state.

1   15.   A process of identifying and managing support service applications as recited in claim

2   5 wherein said remote interactive support service process further comprises the steps of:

3   providing said diagnostic information to the server computing system for the purpose

4   of accessing a selected document based on said problem associated with said selected device;

5   and

6   downloading a document from the server computing system, said document providing

7   instructional information for solving said problem associated with said selected device.

1   16.   A service management software system for execution by a gateway device

2   communicatively coupled with at least one electronic device via a home network, the

3   software system for identifying and managing support service applications associated with

4   each of the electronic devices, the gateway device being operative to access the Internet,

5   comprising:

6   a home network bridge supported by a platform for receiving device ID information

7   associated with a selected one of the electronic devices for which a service application is

8   required;

9   a service manager supported by the platform and being operative to form a uniform

10   resource locator (URL) based at least in part on said device ID information; and

11   an internet bridge supported by the platform and being responsive to receive said

12   URL from said service manager via the platform, and being operative to access a selected

13   server computing system via the Internet using said URL, and to download a support service

14   application associated with said selected device, wherein the platform is operative to

15   dynamically load and unload support service applications.

1   17.   A service management software system as recited in claim 16 wherein said device ID

2   information includes associated vendor information indicative of a vendor of the selected

3   device, and model information indicative of the model of the selected device.

1   18.   A service management software system as recited in claim 17 wherein said service

2   manager is operative to form said URL by performing the steps of:

3   determining a host name based on said vendor information;

4   determining a file path based on said model information; and

5   forming the URL based on said HOST name and said file path.

1   19.   A service management software system as recited in claim 17 wherein said support
2   service application is operative to implement a remote interactive manual process for
3   providing educational instructions to the user regarding operation of said selected device.

1   20.   A service management software system as recited in claim 17 wherein said support
2   service application is operative to implement a remote interactive maintenance process for
3   instructing the user in solving maintenance problems associated with said selected device.

1   21.   A service management software system as recited in claim 17 wherein said support
2   service application is operative to implement a remote interactive support service process
3   comprising the steps of:
4   communicating with said selected device via said home network in order to
5   determine a current functional state of said selected device; and
6   displaying information indicative of said current functional state of said selected
7   device on the display unit.

1   22.   A service management software system as recited in claim 20 wherein said support
2   service process further comprises the steps of:
3   determining diagnostic information based on said current functional state of said
4   selected device, said diagnostic information indicating a problem associated with said
5   selected device; and
6   displaying said diagnostic information on the display unit.

1   23.   A service management software system as recited in claim 22 wherein said support
2   service process further comprises the step of:
3   transmitting said diagnostic information to the server computing system for the
4   purpose of creating a database record based on said diagnostic information and said
5   associated device ID information.
6

1   24.   A service management software system as recited in claim 21 wherein said support
2   service process further comprises the steps of:

3   determining user instructional information based on said current functional state of

4   said selected device, said instructional information for providing instructions to the user for

5   operating said selected device;

6   displaying said user instructional information on the display unit.

1   25.   A process of identifying and providing interactive support service applications

2   associated with consumer electronic devices, the process for execution by a server computing

3   system that is communicatively coupled with at least one client computing system via the

4   Internet, comprising the steps of:

5   receiving device ID information from a client computing system, the device ID

6   information indicating a particular consumer electronic device;

7   accessing a selected support service application associated with the particular device

8   based on said device ID information; and

9   providing said selected support service application associated with the particular

10   device to the client computing system, said application including instructions executable by

11   the client computing system for providing an interactive support service process associated

12   with the particular device.

1   26.   A process as recited in claim 25 wherein said device ID information comprises vendor

2   information indicative of the vendor of the particular device, and model information

3   indicative of the model of the particular device.

1   27.   A process as recited in claim 26 wherein the device ID information further comprises

2   a serial number of the particular device.

1   28.   A process as recited in claim 25 wherein the client computer system is

2   communicatively coupled with the particular device, and wherein said selected support

3   service application includes instructions executable by the client computing system for

4   diagnosing problems associated with the particular device by communicating with the

5   particular device, further comprising the steps of:

6   receiving diagnosis information from the client computing system, said diagnosis

7   information indicating a diagnosed problem associated with the particular device that is

8   determined as a result of execution of said support service application by the client

9   computing system; and

10   creating a database record based on said diagnosis information and said device ID

11 information, said record indicating said diagnosed problem associated with the particular

12 device.

1   29.   A process as recited in claim 25 wherein said support service application comprises

2 instructions executable by the client computing system for generating a help menu enabling a

3 user of the client computing system to select from a list of help topics associated with

4 operation of the particular device, the process further comprising a step of:

5   receiving information indicative of a selected help topic from the client computing

6 system;

7   accessing a selected document based on said selected help topic; and

8   providing said selected document to the client computing system, said selected

9 document providing educational information regarding operation of the particular device.

1   30.   A process as recited in claim 29 wherein the client computer system is

2 communicatively coupled with the particular device, and wherein said selected document

3 further comprises embedded instructions executable by the client computing system for

4 executing an interactive manual support service process for educating a user regarding

5 operation of the particular device, said manual support service process including a step of

6 determining a current functional state of the particular device.

1   31.   A process as recited in claim 25 wherein the client computer system is

2 communicatively coupled with the particular device, and wherein said support service

3 application comprises instructions executable by the client computing system for

4 implementing an interactive manual service for educating a user regarding operation of the

5 particular device.

1   32.   A process as recited in claim 25 wherein the client computer system is

2 communicatively coupled with the particular device, and wherein said support service

3 application comprises instructions executable by the client computing system for

4 implementing an interactive maintenance service enabling a user to solve maintenance

5 problems associated with the particular device.

1   33.   A process as recited in claim 28 wherein the client computing system is a gateway

2 device communicatively coupled with said particular device via a home network, and

3 wherein said support service application comprises instructions executable by the gateway

4 device for implementing a remote interactive service process comprising the steps of:

5   communicating with the particular device via the home network in order to determine

6 a current functional state of the particular device; and

7   displaying information indicative of said current functional state of the particular

8 device on a display unit.

1   34.   A process as recited in claim 33 further comprising the steps of:

2   receiving information indicative of a current functional state of the particular device;

3   accessing a selected document based on the current functional state; and

4   providing said selected document to the gateway device, said selected document

5 providing educational information regarding operation of the particular device taking into

6 account its current functional state.

1   35.   A process as recited in claim 33 wherein said remote interactive service process

2 further comprises the steps of:

3   determining diagnostic information based on said current functional state of the

4 particular device, said diagnostic information indicating a problem associated with the

5 particular device; and

6   displaying said diagnostic information on the display unit; and

7   transmitting said diagnostic information to the client computing system.

1   36.   A process as recited in claim 33 further comprising the steps of:

2   receiving diagnostic information from the client computing system, the diagnostic

3 information indicating a problem associated with the particular device;

4   accessing a selected document based on the diagnostic information; and

5   providing said selected document to the client computing system, said selected

6 document providing instructions for solving the problem associated with the particular

7 device.

1   37.   A process as recited in claim 33 wherein said remote interactive service process

2 further comprises the steps of:

3 determining user instructional information based on said current functional state of

4 the particular device, said instructional information for providing instructions to the user for

5 operating said selected device;

6 displaying said user instructional information on the display unit.

1 38. A process as recited in claim 35 wherein said remote interactive service process

2 further comprises the steps of:

3 determining user instructional information based on said diagnostic information, said

4 instructional information for providing instructions to the user for solving said problem

5 associated with said selected device; and

6 displaying said user instructional information on the display unit.

1 39. A process of identifying and providing interactive support service applications

2 associated with consumer electronic devices, the process for execution by a server computing

3 system that is communicatively coupled with at least one client computing system via the

4 Internet, the client computing system being communicatively coupled with at least one

5 electronic device, the process comprising the steps of:

6 receiving device ID information from the client computing system, the device ID

7 information indicating a particular consumer electronic device that is communicatively

8 coupled with the client computing system;

9 providing a support service application associated with the particular device to the

10 client computing system via the Internet, the application including instructions executable by

11 the client computing system for providing an interactive support service process including a

12 step of automatically determining a problem associated with the particular device;

13 receiving diagnosis information from the client computing system, said diagnosis

14 information indicating a diagnosed problem associated with the particular device that is

15 determined as a result of execution of said instructions by the client computing system; and

16 creating a database record based on said diagnosis information and said device ID

17 information, said record indicating said diagnosed problem associated with the particular

18 device.

1 40. A process as recited in claim 39 wherein said support service application comprises

2 instructions executable by the client computing system for generating a help menu enabling a

3   user of the client computing system to select from a list of help topics associated with

4   operation of the particular device, the process further comprising a step of:

5   receiving information indicative of a selected help topic from the client computing

6   system;

7   accessing a selected document based on said selected help topic; and

8   providing said selected document to the client computing system, said selected

9   document providing educational information regarding operation of the particular device.

1   41.   A process as recited in claim 39 wherein said support service application comprises

2   instructions executable by the client computing system for generating a help menu enabling a

3   user of the client computing system to select from a list of help topics associated with

4   maintenance of the particular device, the process further comprising a step of:

5   providing a selected document to the client computing system in response to

6   information received from the client computing system indicating a selected help topic, said

7   selected document providing instructional information associated with the particular device

8   under the selected topic.

1   42.   A process as recited in claim 39 wherein said step of providing a support service

2   application comprises the steps of:

3   receiving a query including device ID information indicating the particular device

4   from said client computing system; and

5   determining said diagnostic service application associated with the particular device

6   based on said device ID information.

1   43.   A process as recited in claim 39 wherein said support service application comprises

2   instructions executable by the client computing system for executing an interactive manual

3   service for educating a user regarding operation of the particular device.

1   44.   A process as recited in claim 39 wherein said support service application comprises

2   instructions executable by the client computing system for executing an interactive

3   maintenance service enabling a user to solve maintenance problems associated with the

4   particular device.

1   45.   A process as recited in claim 39 wherein the client computing system is a gateway
2   device communicatively coupled with said particular device via a home network, and
3   wherein said support service application comprises instructions executable by the gateway
4   device for implementing a remote interactive service process comprising the steps of:
5   communicating with the particular device via the home network in order to determine
6   a current functional state of the particular device; and
7   displaying information indicative of said current functional state of the particular
8   device on a display unit.

1   46.   A process as recited in claim 45 wherein said remote interactive service process
2   further comprises the steps of:
3   determining diagnostic information based on said current functional state of the
4   particular device, said diagnostic information indicating a problem associated with the
5   particular device; and
6   displaying said diagnostic information on the display unit; and
7   transmitting said diagnostic information to the server computing system.

1   47.   A process as recited in claim 45 wherein said remote interactive service process
2   further comprises the steps of:
3   determining user instructional information based on said current functional state of
4   the particular device, said instructional information for providing instructions to the user for
5   operating said selected device;
6   displaying said user instructional information on the display unit.

1   48.   A process as recited in claim 46 wherein said remote interactive service process
2   further comprises the steps of:
3   determining user instructional information based on said diagnostic information, said
4   instructional information for providing instructions to the user for solving said problem
5   associated with said selected device; and
6   displaying said user instructional information on the display unit.

1   49.   A process as recited in claim 39 wherein said step of providing a support service
2   application associated with a particular consumer electronic device comprises:

3   receiving device ID information from the client computing system, the device ID

4   information including vendor information indicative of the vendor of the particular device,

5   and model information indicative of the model of the particular device; and

6   determining the support service application associated with the particular device

7   based on the device ID information

1   50.   A process as recited in claim 49 wherein the device ID information further comprises

2   a serial number of the particular device.

1   51.   A process as recited in claim 47 further comprising the steps of:

2   receiving information indicative of a current functional state of the particular device;

3   accessing a selected document based on the current functional state; and

4   providing said selected document to the client computing system, said selected

5   document providing educational information regarding operation of the particular device

6   taking into account its current functional state.

1   52.   A process as recited in claim 46 further comprising the steps of:

2   receiving diagnostic information from the client computing system, the diagnostic

3   information indicating a problem associated with the particular device;

4   accessing a selected document based on the diagnostic information; and

5   providing said selected document to the client computing system, said selected

6   document providing instructions for solving the problem associated with the particular

7   device.